

# **Effective Air Interdiction in Peace Enforcement**

**A Monograph**

**by**

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First Term AY 00-01

Approved for public release; distribution unlimited

# REPORT DOCUMENTATION PAGE

1. REPORT DATE (DD-MM-YYYY) 01-01-2001	2. REPORT TYPE monograph	3. DATES COVERED (FROM - TO) xx-xx-2000 to xx-xx-2001
4. TITLE AND SUBTITLE Effective Air Interdiction in Peace Enforcement  Unclassified	5a. CONTRACT NUMBER	
	5b. GRANT NUMBER	
	5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Evans, Robert D. ;	5d. PROJECT NUMBER	
	5e. TASK NUMBER	
	5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME AND ADDRESS USA Command & General Staff College School of Advanced Military Studies 1 Reynolds Ave. Fort Leavenworth , KS 66027	8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS  ,	10. SPONSOR/MONITOR'S ACRONYM(S)	
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT A PUBLIC RELEASE   ,		

### 13. SUPPLEMENTARY NOTES

#### 14. ABSTRACT

The United States Air Force has become increasingly involved in peace enforcement missions throughout the world since the end of the Cold War. Recent examples include Operations Allied Force and Deliberate Force in the Balkans, and Operations Northern Watch and Southern Watch in Iraq. While monitoring no-fly zones is the most obvious mission assigned to air forces conducting peace enforcement operations, it is not the only way in which airpower contributes. Other missions include enforcement of sanctions and exclusion zones, protection of shipping, strikes and raids, and shows of force. In order to perform these missions, the basic U.S. Air Force combat functions must be adapted to fit the unique environment of the peace enforcement operation. Although peace enforcement missions may differ considerably from traditional combat, United States Air Force doctrine provides only broad guidance on how basic functions apply to peace enforcement. U.S. Air Force Doctrine Document 2-3, Military Operations Other Than War, states that Air Force units support peace enforcement with traditional air-to-air and air-to-ground operations, but does not describe how these operations are conducted or integrated with the joint force. Instead, the U.S. Air Force believes that normal operational doctrine provides sufficient guidance to accomplish these missions. This monograph challenges the claim that normal U.S. Air Force operational doctrine provides an acceptable basis for peace enforcement. Specifically, the monograph determines whether current U.S. Air Force doctrine promotes effective air interdiction in a peace enforcement operation, using a division-sized land component as a model. The author has determined three criteria for effective air interdiction in peace enforcement operations: unity of effort, responsiveness, and flexibility. These criteria provide a lens through which to examine the suitability of current doctrine to the challenge of providing effective air interdiction to a division-sized force conducting peace enforcement. The author chose a division-sized force because of the unique command and control relationships, near-term planning focus, and potential for such a force to conduct a peace enforcement mission as the land component of a Joint Task Force. The author has organized the monograph into four chapters. The first chapter defines the environment of peace enforcement. Following chapters examine flexibility in air interdiction doctrine, unity of effort and responsiveness. The final chapter analyzes the suitability of current U.S. Air Force doctrine to provide effective air interdiction to U.S. Army divisions conducting peace enforcement missions. The monograph concludes that current doctrine allows for the tailored capabilities needed by the division and promotes effective air interdiction that is flexible, responsive and applied with unity of effort.

#### 15. SUBJECT TERMS

AIR INTERDICTION; PEACE ENFORCEMENT

#### 16. SECURITY CLASSIFICATION OF:

#### 17. LIMITATION OF ABSTRACT

Same as  
Report  
(SAR)

#### 18. NUMBER OF PAGES

55

#### 19a. NAME OF RESPONSIBLE PERSON

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<b>a. REPORT</b> Unclassified	<b>b. ABSTRACT</b> Unclassified	<b>c. THIS PAGE</b> Unclassified			<b>19b. TELEPHONE NUMBER</b> International Area Code  Area Code Telephone Number 913 758-3171 DSN 585-3171
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## **ABSTRACT**

EFFECTIVE AIR INTERDICTION IN PEACE ENFORCEMENT by MAJOR Robert D. Evans, USAF, 55 pages.

The United States Air Force has become increasingly involved in peace enforcement missions throughout the world since the end of the Cold War. Recent examples include Operations Allied Force and Deliberate Force in the Balkans, and Operations Northern Watch and Southern Watch in Iraq. While monitoring no-fly zones is the most obvious mission assigned to air forces conducting peace enforcement operations, it is not the only way in which airpower contributes. Other missions include enforcement of sanctions and exclusion zones, protection of shipping, strikes and raids, and shows of force. In order to perform these missions, the basic U.S. Air Force combat functions must be adapted to fit the unique environment of the peace enforcement operation.

Although peace enforcement missions may differ considerably from traditional combat, United States Air Force doctrine provides only broad guidance on how basic functions apply to peace enforcement. U.S. Air Force Doctrine Document 2-3, *Military Operations Other Than War*, states that Air Force units support peace enforcement with traditional air-to-air and air-to-ground operations, but does not describe how these operations are conducted or integrated with the joint force. Instead, the U.S. Air Force believes that normal operational doctrine provides sufficient guidance to accomplish these missions.

This monograph challenges the claim that normal U.S. Air Force operational doctrine provides an acceptable basis for peace enforcement. Specifically, the monograph determines whether current U.S. Air Force doctrine promotes effective air interdiction in a peace enforcement operation, using a division-sized land component as a model.

The author has determined three criteria for effective air interdiction in peace enforcement operations: unity of effort, responsiveness, and flexibility. These criteria provide a lens through which to examine the suitability of current doctrine to the challenge of providing effective air interdiction to a division-sized force conducting peace enforcement. The author chose a division-sized force because of the unique command and control relationships, near-term planning focus, and potential for such a force to conduct a peace enforcement mission as the land component of a Joint Task Force.

The author has organized the monograph into four chapters. The first chapter defines the environment of peace enforcement. Following chapters examine flexibility in air interdiction doctrine, unity of effort and responsiveness. The final chapter analyzes the suitability of current U.S. Air Force doctrine to provide effective air interdiction to U.S. Army divisions conducting peace enforcement missions. The monograph concludes that current doctrine allows for the tailored capabilities needed by the division and promotes effective air interdiction that is flexible, responsive and applied with unity of effort.

## TABLE OF CONTENTS

Chapter One	
INTRODUCTION.....	1
PEACE ENFORCEMENT .....	4
AIR INTERDICTION IN PEACE ENFORCEMENT .....	8
Chapter Two	
AIR INTERDICTION DOCTRINE .....	13
REACTIVE AIR INTERDICTION .....	15
PROACTIVE AIR INTERDICTION .....	17
KILLBOX INTERDICTION .....	20
Chapter Three	
IMPERATIVES: UNITY OF EFFORT AND RESPONSIVENESS.....	24
UNITY OF EFFORT.....	25
RESPONSIVENESS.....	31
Chapter Four	
EFFECTIVE AIR INTERDICTION IN PEACE ENFORCEMENT .....	38
CONCLUSION .....	42
BIBLIOGRAPHY.....	44

## CHAPTER ONE

### INTRODUCTION

“We cannot afford to ignore what appears to be a deliberate and systematic extermination of human beings based on their ethnic origin...I would begin with air power, against the Serbs, to try to restore the basic conditions of humanity.”<sup>1</sup>

President Bill Clinton

The new world order continues to challenge those committed to ensuring peace. While the threat of major war has certainly diminished, the use of military forces to restore and maintain peace is on the rise. The President of the United States has deployed forces on peace operations at a dramatically increasing rate since the end of the Cold War. Noted futurist Robert Kaplan gives us reason to believe that this trend will continue. Kaplan paints West Africa as “the symbol of worldwide demographic, environmental, and societal stress, in which criminal anarchy emerges as the real strategic danger.”<sup>2</sup> If Kaplan is correct in his view that issues plaguing West Africa will soon confront our own civilization, then peace operations will continue to grow in frequency and importance.

Peace operations include peacekeeping, peace enforcement, and support to diplomacy. Traditional peacekeeping missions normally involve limited force, high levels of consent and strict impartiality. In contrast, peace enforcement missions involve lower levels of consent and impartiality.<sup>3</sup> Military forces conducting peace enforcement operations may use force, or the threat of force, to compel compliance with generally accepted resolutions or sanctions. These operations are normally pursuant to international authorization and seek to maintain or restore peace and support diplomatic efforts to reach a long-term political settlement. Missions assigned to forces conducting peace enforcement may include: restoration and maintenance of order and

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<sup>1</sup> William Clinton, quoted in R.W. Apple Jr., “Baker Aide Asks War Crimes Inquiry Into Bosnia Camps,” *New York Times*, 6 August 1992: 1.

<sup>2</sup> Robert D. Kaplan, *The Coming Anarchy* (New York: Random House, 2000), 7.

<sup>3</sup> Department of the Army, *FM 100-23 Peace Operations* (Washington, D.C.: GPO, 1994), 13.

stability, protection of humanitarian assistance, guarantee and denial of movement, enforcement of sanctions, establishment and supervision of protected zones, and forcible separation of belligerents.<sup>4</sup> Such diverse missions require a tailored blend of air and land based capabilities.

Airpower has become a common component of contemporary peace operations. Airpower can deploy rapidly to deliver humanitarian aid, show resolve or deter escalation in a developing crisis. Airpower used in conjunction with other forces can shape the environment for the secure deployment of ground forces. Once ground forces are in place, offensive airpower can deliver precision weapons to provide low-risk firepower, while minimizing collateral damage. The ability to operate without excessive risk to personnel while minimizing collateral damage makes airpower particularly well suited to peace enforcement missions.<sup>5</sup>

The United States Air Force has become increasingly involved in peace enforcement missions throughout the world since the end of the Cold War. Recent examples include Operations Allied Force and Deliberate Force in the Balkans, and Operations Northern Watch and Southern Watch in Iraq. While monitoring no-fly zones is the most obvious mission assigned to air forces conducting peace enforcement operations, it is not the only way in which airpower contributes. Other missions include enforcement of sanctions and exclusion zones, protection of shipping, strikes and raids, and shows of force.<sup>6</sup> In order to perform these missions, the basic U.S. Air Force combat functions must be adapted to fit the unique environment of the peace enforcement operation.<sup>7</sup>

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<sup>4</sup> Department of the Army, *FM 100-23 Peace Operations* (Washington, D.C.: GPO, 1994), 7.

<sup>5</sup> Air power cannot eliminate collateral damage. However, precision weapons delivered by land and air systems may reduce unwanted effects. The offensive air campaign conducted during Operation Allied Force did not result in a single American casualty. The fatalities suffered by Task Force Hawk occurred during training missions.

<sup>6</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 13-14.

<sup>7</sup> The basic functions of the U.S. Air Force describe the broad, fundamental and continuing activities of air and space power and include: strategic attack, counterair, counterland, countersea, counterspace, counterinformation, command and control, airlift, air refueling, spacelift, special operations employment, intelligence, surveillance, reconnaissance, combat search and rescue, navigation and positioning, and weather services. These functions are not unique to the U.S. Air Force, but together they represent the



Although peace enforcement missions may differ considerably from traditional combat, United States Air Force doctrine provides only broad guidance on how basic functions apply to peace enforcement. U.S. Air Force Doctrine Document 2-3, *Military Operations Other Than War*, states that Air Force units support peace enforcement with traditional air-to-air and air-to-ground operations, but does not describe how these operations are conducted or integrated with the joint force. Instead, the Air Force believes that normal operational doctrine provides sufficient guidance to accomplish these missions.<sup>8</sup> William C. Thomas and Jeremy D. Cukierman, writing for the Institute for National Security Studies, agreed. They noted that,

“The Air Force does not have specific doctrine for peace operations; because many Air Force missions in peacekeeping are similar to wartime missions, the development of a separate doctrine is not required. Peace operations make use of Air Force capabilities and functions such as Counterland, Counterair, Airlift, Air Mobility Support, Information Operations, and others. Doctrine for these functional areas already exists.”<sup>9</sup>

This monograph challenges the claim that normal U.S. Air Force operational doctrine provides an acceptable basis for peace enforcement. Specifically, the monograph determines whether current U.S. Air Force doctrine promotes effective air interdiction in a peace enforcement operation, using a division-sized land component as a model.

The author has determined three criteria for effective air interdiction in peace enforcement operations: unity of effort, responsiveness, and flexibility. These criteria provide a lens through which to examine the suitability of current doctrine to the challenge of providing effective air interdiction to a division-sized force conducting peace enforcement. The author chose a division-sized force because of the unique command and control relationships, near-term planning focus, and potential for such a force to conduct a peace enforcement mission as the land component of a Joint Task Force (JTF).

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means by which the U.S. Air Force performs its assigned roles. Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 45.

<sup>8</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 21.

The author has organized the monograph into four chapters. The first chapter defines the environment of peace enforcement. Following chapters will examine flexibility in air interdiction doctrine, unity of effort and responsiveness. The final chapter analyzes the suitability of current U.S. Air Force doctrine to provide effective air interdiction to U.S. Army divisions conducting peace enforcement.

## PEACE ENFORCEMENT

“The use of force introduces the fear, physical strain and uncertainty, which are among the hallmarks of the nature of warfare.”<sup>10</sup>

Although there are important political, diplomatic, and legal differences between war and military operations other than war, there exists a singularly important threshold. The use or threat of use of military force of any kind may push the force over this edge. In the range of military operations, this threshold marks the distinction between non-combat and combat operations.<sup>11</sup> United States joint doctrine defines peace enforcement operations as, “the application of military force or the threat of its use, normally pursuant to international authorization, to compel compliance with resolutions or sanctions designed to maintain or restore peace and order.”<sup>12</sup>

Peace enforcement missions often require immediate response in order to satisfy world opinion and prevent a crisis from escalating. Complexity, ambiguity and uncertainty combine to make planning for peace operations a difficult task. The National Command Authorities may task United States forces to deploy without a complete picture of the political, military and cultural situation. Unresolved political issues, an unclear end state, or difficulty in gaining international consensus may increase ambiguity.<sup>13</sup> Diplomatic initiatives and changing political objectives may dramatically alter the military role after the force is in place. The complex and

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<sup>9</sup> William C. Thomas and Jeremy D. Cukierman, *The Next Peace Operation: U.S. Air Force Issues and Perspectives* (USAF Academy: USAF Institute for National Security Studies, 1999), 29.

<sup>10</sup> Joint Chiefs of Staff, *JP 3-07 Joint Doctrine for Military Operations Other than War* (Washington, D.C.: GPO, 1995), I-6.

<sup>11</sup> Ibid.

<sup>12</sup> Joint Chiefs of Staff, *JP 3-07.3 JTTP for Peace Operations* (Washington, D.C.: GPO, 1999), I-7.

fluid environment of peace operations requires commanders and their staffs to continuously analyze the mission and plan for uncertainty. Expanding on the principles of war, joint doctrine adds three additional principles for military operations other than war: restraint, legitimacy, and perseverance.<sup>14</sup> To achieve success in peace enforcement, the commander must balance these principles with the ability to dominate escalation in an environment of political primacy.

The principle of restraint requires the commander to use military capability prudently. Force must be used judiciously and be proportional to the task. Excessive force may antagonize the parties involved, damage legitimacy, and reduce international support for the operation. Restraint requires the careful balancing of the need for security, the conduct of operations and the political objective.<sup>15</sup> While the force must be able to defend itself, political requirements or force caps, may limit the size of the initial entry force and dictate its composition.<sup>16</sup> For example, in order to portray a non-hostile presence, the deployment of tanks and self-propelled artillery may be restricted. For the commander, the problem becomes how to kick a belligerent firmly in the tail with a boot that leaves a small footprint, without getting your foot stuck in the process. The U.S. Army doctrine for peace operations recognizes this challenge, and the role airpower might play. Field Manual 100-23, *Peace Operations*, states that, “Tactical air (TACAIR) can provide selective firepower, particularly in the employment of precision-guided munitions.”<sup>17</sup> Military

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<sup>13</sup> Ibid, p. I-12.

<sup>14</sup> Joint Chiefs of Staff, *JP 3-0 Doctrine for Joint Operations* (Washington, D.C.: GPO, 1995), V-3-4.

<sup>15</sup> Joint Chiefs of Staff, *JP 3-07 Joint Doctrine for Military Operations Other than War* (Washington, D.C.: GPO, 1995), II-4.

<sup>16</sup> Force caps establish limits on the number of military personnel, number and type of weapons, or the type of units deployed in support of peace operations. To be avoided are force caps that may result in a force structure that is not appropriate to the mission or the threat and may cause an otherwise avoidable increase in risk. Joint Chiefs of Staff, *JP 3-07.3 JTTP for Peace Operations* (Washington, D.C.: GPO, 1999), I-14.

<sup>17</sup> The field manual also states that collateral damage and unexploded ordnance are significant planning factors when considering the employment of TACAIR. Department of the Army, *FM 100-23 Peace Operations* (Washington, D.C.: GPO, 1994), 42. Joint and U.S. Air Force doctrine does not define TACAIR. However, it is commonly understood to mean offensive air missions flown in support of ground forces, and before 1992, included battlefield air interdiction (BAI). A similar term, used by NATO, is offensive air support, which includes tactical reconnaissance, close air support, and air interdiction flown in support of ground forces. The original NATO definition of OAS included CAS, AI and tactical air reconnaissance. In 1977, at the urging of the USAF, NATO removed AI and replaced it with battlefield air interdiction (BAI). The USAF objected to the RAF use of BAI, and the final definition reflected a

capabilities used prudently, and with restraint, may reinforce the legitimacy of peace enforcement operations.

Legitimacy is the key enabler of peace enforcement operations, and is frequently a decisive element. Joint doctrine defines legitimacy as, “a condition based on the perception by a specific audience of the legality, morality, or rightness of a set of actions.”<sup>18</sup> Restraint in the use of force, the type of forces employed, and the disciplined conduct of the forces involved, may enhance legitimacy. The support of the American public may rapidly erode if there is perception that the operation needlessly or carelessly risks American lives. The most vivid example of this occurred in early October 1993, after an angry Somali mob killed 18 American soldiers in the streets of Mogadishu. In his book, *Black Hawk Down*, author Mark Bowden described the aftermath.

“Now they were in trouble. The day after the October 3 battle, Secretary of Defense Les Aspin and Secretary of State Warren Christopher had been grilled by angry members of Congress. How had this happened? Why were American soldiers dying in far-off Somalia when the humanitarian mission there had supposedly ended months before? As many as five hundred Somalis had been killed and over a thousand injured. Durant was still a captive. The public was outraged, and congress was demanding withdrawal.”<sup>19</sup>

On October 6, President Clinton announced that U.S. troops would withdraw from Somalia.<sup>20</sup>

Without legitimacy, peace enforcement operations may not be sustainable long enough to achieve the desired end state.<sup>21</sup>

While military forces often conduct peace operations on short notice, they may require long-term commitments to resolve the issues that led to the escalation of tension or conflict. Perseverance prepares military forces for the measured, protracted application of military

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compromise. Current USAF doctrine does not differentiate BAI from AI, although it does promote AI in direct support of ground forces, reflecting the ground components targeting priorities. See Maris McCrabb, “The Evolution of NATO Air Doctrine,” in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger, (Maxwell AFB: Air University Press, 1997), 456-460 and Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 2,10,27.

<sup>18</sup> Joint Chiefs of Staff, *JP 3-07.3 JTTP for Peace Operations* (Washington, D.C.: GPO, 1999), II-5.

<sup>19</sup> Mark Bowden, *Black Hawk Down* (New York: Atlantic Monthly Press, 1999), 310.

<sup>20</sup> William J. Durch, ed., *U.N. Peacekeeping, American Policy, and the Uncivil Wars of the 1990s* (New York: St. Martin’s Press, 1996), 347.

<sup>21</sup> Joint Chiefs of Staff, *JP 3-07 Joint Doctrine for Military Operations Other than War* (Washington, D.C.: GPO, 1995), II-5.

capability in support of strategic aims.<sup>22</sup> The multinational peace enforcement operation to prevent Iraqi aggression against the Kurdish minority in Northern Iraq has been ongoing for almost ten years.<sup>23</sup> Long-term solutions are primarily political, and may not be achievable by short-term military actions.<sup>24</sup> The long-term nature of peace enforcement operations suggests a carefully measured force to reduce the burden on our limited military forces and retain sufficient force to handle major contingencies, such as the defense of South Korea.

The principles of restraint, legitimacy and perseverance may suggest the deployment of a smaller force; however, the peace enforcement mission may require these forces to operate over large areas. Dispersed units operating over vast areas are much more difficult to protect in the uncertain environment of peace enforcement. In fact, force protection quickly becomes the commander's number one priority during peace enforcement missions. The prime aim must be to attack with sufficient, but proportionate, force so protagonists are convinced that continued non-compliance is worthless.<sup>25</sup> This concept, termed escalation dominance by the North Atlantic Treaty Organization (NATO) Air Defense Committee, gives commanders a tool to control the level of violence in peace enforcement.<sup>26</sup> Escalation dominance is analogous to a big brother preventing a bully from stealing his little brother's lunch money. Although the big brother is not physically present, he presents a credible threat and prevents the bully from acting. However, the

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<sup>22</sup> Ibid, II-4.

<sup>23</sup> Operation Northern Watch (ONW) is the successor to Operation Provide Comfort, which officially ended in December 1996. Operation Northern Watch began Jan. 1, 1997, with an initial mandate of six months. The Turkish parliament reviews and renews the ONW mandate semi-annually in June and December. ONW is a Combined Task Force charged with enforcing the no-fly zone north of the 36th parallel in Iraq and monitoring Iraqi compliance with UN Security Council resolutions. U.S. European Command, *Operation Northern Watch*. Available from <http://www.eucom.mil/operations/onw/index.htm>. Internet.

<sup>24</sup> Joint Chiefs of Staff, *JP 3-07.3 JTTP for Peace Operations* (Washington, D.C.: GPO, 1999), I-14.

<sup>25</sup> Institute for Security Studies, "Joint Force Considerations," *Peace Support Operations: A Working Draft Manual for African Military Practitioners* (Pretoria: Institute for Security Studies, 2000), paragraph 434. Available from <http://www.iss.co.za/Pubs/Other/PeaceSupportManual-MM/Ch4.html>. Internet.

<sup>26</sup> Report of the NATO Air Defence Committee, "The Role of Air Power in Peace and Humanitarian Operations, Executive Summary," by L. Van Der Laan, secretary. (Brussels: North Atlantic Treaty Organization, 1995), 6.

threat of force alone may not influence all parties. Even worse, the use of force may actually increase the threat to American forces.

Enforcing peace presents the commander with significant challenges. He must deploy his forces rapidly, do so without substantial organic fire support, and operate across a wide frontier, all in an environment that could rapidly escalate to war. The principles of restraint, perseverance and legitimacy, balanced with the need for force protection and escalation dominance, guide the commander and his staff. As with any military operation, the course of action must satisfy the political objectives. The environment of peace enforcement, characterized by complexity, ambiguity and uncertainty, requires flexibility and innovation. In order to succeed, commanders must integrate the capabilities of the joint force, tapping into the full spectrum of capabilities. One of the most powerful joint capabilities available to the commander is air interdiction.

## **AIR INTERDICTION IN PEACE ENFORCEMENT**

“Ground commanders must be educated on the inherent flexibility of the aerospace planning and execution process and must understand that air support comes in many forms other than CAS.”<sup>27</sup>

United States joint doctrine defines air interdiction as, “air operations conducted to destroy, neutralize, or delay the enemy’s military potential before he can bring it to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.”<sup>28</sup> This definition contains three points of particular relevance to peace enforcement. First, air interdiction is preventative. Properly applied, air interdiction may prevent or delay an adversary from affecting the mission. Next, Air Forces may conduct interdiction across vast areas, away from friendly forces. Finally, air interdiction can use lethal or non-lethal means to achieve the desired effects, which range from destruction to simply delay or neutralization. For example, during Operation Just Cause, U.S. Air

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<sup>27</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 85.

Force F-117s dropped laser-guided bombs near the Panamanian Defense Forces barracks at Rio Hato Airfield. Planners designed the attack to stun and disorganize the defenders, while minimizing collateral damage and maintaining legitimacy.<sup>29</sup> By preventing enemy interference across wide areas, using both lethal and non-lethal means, air interdiction can be a valuable tool for the commander charged with peace enforcement.

The objectives of peace enforcement and air interdiction are closely related. Both seek to prevent or delay activity of some kind. For interdiction, this might mean preventing military forces from reaching the front lines. Similarly, peace enforcement may seek to prevent belligerents from threatening geographic zones with heavy weapons. For example, a mandate may require that belligerents keep artillery away from a specific location. While the objectives are similar, a key difference separates peace enforcement from traditional air interdiction--timing. Air forces conduct traditional interdiction missions as part of a preplanned, proactive campaign. In contrast, peace enforcement actions are typically reactive. Using the movement of heavy artillery as an example, traditional air interdiction might attack the artillery proactively, before it moved, as part of a wider campaign. Forces conducting peace enforcement would likely wait until a specific event occurred, such as movement toward a village or beyond a phase line, before

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<sup>28</sup> Joint Chiefs of Staff, *JP 3-03 Doctrine for Joint Interdiction Operations* (Washington, D.C.: GPO, 1997), GL-2.

<sup>29</sup> The plan originally called for the F-117s to drop their bombs directly on the barracks. Higher officials rejected this plan, fearing excessive collateral damage. Planners moved the aim point 50 yards from the barracks. At the last minute, officials increased this distance to 250 yards from the building. Although the bombs hit the aim point with great precision, the attack failed to achieve the desired results. By the time the bombs hit, most Panamanians were already aware of the impending invasion and were taking up defensive positions. The attack did demonstrate the potential for precision non-lethal air interdiction. Bernard Nalty, *Winged Shield, Winged Sword: A History of the United States Air Force, Volume II* (Washington, D.C.: Air Force History and Museums Program, 1997), 436. Thomas Donnelly, Margaret Roth and Caleb Baker present an alternate view in their book, *Operation Just Cause: The Storming of Panama*. In this book, the authors state that the lead pilot, “dumped his one-ton payload several hundred meters to the north and west of where it was intended; he did not have precise targeting information. The second pilot, orienting on [the lead pilot], also dropped his bomb between the two company buildings.” The difference in these two accounts is probably related to the lack of unclassified information concerning the first combat use of the F-117 Stealth Fighter at the time of writing, and different interpretations of personal accounts. Thomas M. Donnelly, Margaret Roth and Caleb Baker, *Operation Just Cause: The Storming of Panama* (New York: Lexington Books, 1991), 340.

reacting. The situation may build rapidly to the point where attack is required. Such was the case for the first use of air interdiction in peace enforcement.

In May 1919, the Afghani Army, supported by tribal bandits, seized the town of Bagh on the Indian border. The bold action by this force, totaling some 130,000 men, caused the British Chief Commissioner of the region to dispatch a Brigade-size strike force to dislodge the invaders. The Afghans repulsed the initial British attack. Hostile tribes massing near the outnumbered British force made the situation grave. The tide turned suddenly, when three BE-2C bombers of the fledgling Royal Air Force attacked and routed the threatening tribesmen. In subsequent joint air and land operations, the British forces pushed the invaders back across the border in just two days.<sup>30</sup> The use of air interdiction in peace enforcement by the British during the Third Afghan War established a new role for airpower and started the debate, which continues today.<sup>31</sup>

In 1919, Winston Churchill argued that airpower could succeed without the costly deployment of ground troops, supporting the recommendation of the newly appointed British High Commissioner for Iraq, Lieutenant Colonel Sir Arnold Wilson. Based on the size and geographical diversity of Iraq, Sir Arnold had suggested that aircraft could control Iraq in place of ground troops. Aircraft flying above the threat of ground fire could deliver punitive strikes and prevent the surprise ambushes of the British columns. The idea worked, and airpower found a new role, at a time that the Royal Air Force was struggling to remain viable. Nevertheless, not everyone was convinced of the utility of aircraft in a role performed exclusively by ground troops for hundreds of years.<sup>32</sup>

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<sup>30</sup> Bruce Hoffman, *British Air Power in Peripheral Conflict, 1919-1976* (Santa Monica: Rand Corporation, 1989), 4.

<sup>31</sup> The initial use of air power for peace enforcement was only partially successful. Only when combined with the efforts of ground forces was air support effective. The air operations against the Afghans and Frontier tribesmen in 1919 and 1920 became a matter of intense debate. David Omissi, *Air Power and Colonial Control: The Royal Air Force 1919-1939* (Manchester: Manchester University Press, 1990), 11-13.

<sup>32</sup> In a speech before the House of Commons, Churchill declared that, "the first duty of the RAF was to garrison the empire." Bruce Hoffman, *British Air Power in Peripheral Conflict, 1919-1976* (Santa Monica: Rand Corporation, 1989), 9.



The general officer commanding troops in Iraq, General Sir Aylmer Haldane reserved judgment. After airpower succeeded in relieving the besieged garrison at Rumaithah, he admitted that his earlier views on airpower had been shortsighted and ill considered. In his memoir, published in 1922, General Haldane remarked that, “disturbances can be checked or prevented from arising by aircraft, and unless, which is improbable, rebellion were to arise in every corner at once, the sudden arrival of aeroplanes on several days should act as a preventative.”<sup>33</sup> While army commanders admitted the value of airpower in peace enforcement, air force commanders realized its limitations. Air Commodore Webb-Brown, who commanded the air force during the Afghan campaign in 1919, was correct when he observed that, “the RAF acting alone will never overcome a courageous people.”<sup>34</sup>

Success in peace enforcement comes when air and land forces work together. The British experiences in colonial control proved the value of air interdiction in peace enforcement and provided the first criteria for its effective use, unity of effort. It must begin with a common understanding of the capabilities and limitations of all participants. Liaison and coordination may help foster understanding and ensure that components direct all means towards a common purpose. Unity of effort ensures that the actions of air and land forces contribute towards a common goal, and provides purpose for the other criteria for effective air interdiction in peace enforcement: responsiveness and flexibility.

Air interdiction in support of peace enforcement must be responsive to the needs of the supported commander. Responsiveness requires a clear understanding and acceptance of command relationships, and the capability to provide the desired support. In most peace enforcement operations involving ground forces, air interdiction supports the ground commander. U.S. Air Force doctrine for military operations other than war acknowledges the supporting role

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<sup>33</sup> Ibid, p. 12.

<sup>34</sup> David Omissi, *Air Power and Colonial Control: The Royal Air Force 1919-1939* (Manchester: Manchester University Press, 1990), 13.

close air support and air interdiction plays in these operations.<sup>35</sup> The commander on the ground normally has the most complete understanding of the situation required to guide the efforts of the joint force. Responsiveness requires air interdiction to deliver the desired effects, on the correct target, within the time constraints established by the ground commander. Responsiveness, in turn, demands highly flexible air interdiction forces, able to adapt to dynamic situations.

Flexibility allows the commander to adapt to change and cope with uncertainty. In the politically charged environment of peace enforcement, the commander must plan for uncertainty with limited assets. Air forces conducting peace enforcement missions may be restricted in size for political reasons, lack of suitable bases, or to avoid escalation. The Joint Force Commander may charge these forces with a variety of missions, such as monitoring compliance with a no-fly zone, performing armed reconnaissance, and supporting ground forces. This limited force must be able to rapidly shift missions as the situation changes. For example, multi-role F-15E fighters patrolling a no-fly zone must be able to rapidly respond to a higher priority air interdiction tasking. This requires highly capable and versatile aircraft and extremely flexible employment options. More importantly, air interdiction operations in peace enforcement demand a command and control process with flexibility built-in to cope with the dynamic and rapidly changing environment typical of such operations.

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<sup>35</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 11.

## CHAPTER TWO

### AIR INTERDICTION DOCTRINE

“When something had to be struck the same day - the target was detected in the morning and it had to be struck sometime that day - two systems could do it: the carrier air wing and the Tomahawk. Nothing else could, and that’s just a fact.”<sup>36</sup>

Vice Admiral Daniel J. Murphy Jr.  
Sixth Fleet Commander, Operation Allied Force

U.S. Air Force Basic Doctrine lists flexibility as a prime tenet of airpower, enabling air and space forces to exploit mass and maneuver simultaneously.<sup>37</sup> However, as the opening quote illustrates, unleashing airpower’s inherent flexibility often proves difficult. The conflict arises from the natural friction between control and flexibility. Air interdiction is at the center of the debate. Since the well-publicized and debated difficulties of battlefield air interdiction during Operation Desert Storm, significant advances in doctrine and capabilities have emerged to change the way the U.S. Air Force supports ground forces.<sup>38</sup> Recognizing the tremendous capabilities made possible by rapidly improving technology and necessitated by the changing nature of the battlespace, *U.S. Air Force Doctrine Document 2-1.3 Counterland*, formalized the evolving concept of flexible air interdiction.<sup>39</sup> Properly applied, flexible air interdiction can operate inside the enemy’s decision cycle, magnifying the shock effect of airpower.

Shortly after the perceived failings of battlefield air interdiction in Operation Desert Storm, a new term gained acceptance. U.S. Air Force doctrine defined counterland as, “operations to attain and maintain a desired degree of superiority over surface operations by the destruction, disrupting, delaying, diverting, or other neutralization of enemy forces. The main objectives of counterland operations are to dominate the surface environment and prevent the opponent from

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<sup>36</sup> Daniel J. Murphy, “The Navy in the Balkans”, *Air Force Magazine*, December 1999, 49.

<sup>37</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 23.

<sup>38</sup> General Franks had no problems with close air support, but his seeming inability to influence air interdiction targets bothered him. Tom Clancy and Gen (Ret.) Fred Franks, *Into the Storm* (New York: Berkley Books, 1998), 340-341.

<sup>39</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 27.

doing the same.”<sup>40</sup> Counterland operations and peace enforcement share an important objective, preventing an enemy from gaining advantage on the ground. Close air support and air interdiction in support of ground forces, overlap with theater-wide interdiction to form the counterland spectrum.<sup>41</sup> Although close air support may have tremendous application in peace enforcement, the U.S. Air Force only performs this mission in close proximity to friendly troops.<sup>42</sup> Close air support aircraft may certainly fly counterland missions at great distances from friendly ground forces, but these missions are technically air interdiction. Additionally, some critics have raised concerns over air interdiction’s responsiveness to the ground commander, and therefore it may present more a significant doctrinal challenge in the peace enforcement arena.<sup>43</sup>

The 1999 U.S. Air Force counterland doctrine revived the concept of Battlefield Air Interdiction (BAI), by differentiating interdiction in support of a ground commander from the JFC’s theater-wide interdiction effort.<sup>44</sup> U.S. Air Force counterland doctrine ascribes air interdiction with the flexibility to operate either in support of surface operations or as the main effort against enemy ground forces.<sup>45</sup> Further, it states, “the JFACC, who is normally the Commander of Air Force Forces, COMAFFOR, is the supported commander for the JFC’s

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<sup>40</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 48.

<sup>41</sup> Following World War II, close air support developed into a flexible system for providing direct support to ground commanders on request. U.S. Air Force doctrine now calls this demand-based system “Pull CAS”. The Air Component Commander provided sorties to the Land Component Commander to “pull” into action when the situation dictated. Although this system worked well for many years, it underutilized valuable CAS sorties. During Operation Desert Storm, the U.S. Air Force developed a new system called “Push CAS”. Push CAS missions are scheduled to arrive at a specified contact point at a specified time, normally in continuous flow, to provide constant CAS assets to support the ground commander. The term “push” refers to the fact that these CAS missions are “pushed” forward to the terminal attack controllers before the formal CAS request is made. The Land Component Commander often used the excess CAS sorties against deeper targets, in effect conducting battlefield air interdiction. Owing to the tremendous success of push-CAS in Operation Desert Storm, U.S. Air Force doctrine now formally recognizes, and most major theaters advocate the push-CAS concept. Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), v, 41-42.

<sup>42</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 85.

<sup>43</sup> This observation is the authors alone, based on experiences at the U.S. Army’s Command and General Staff College 1999-2000. Some U.S. Army officers believed that CAS is the only effective air support for ground operations. It is worth noting that the vast majority of U.S. Army officers that the author encountered understand the value of air interdiction.

<sup>44</sup> The U.S. Air Force purged all references to battlefield air interdiction in the 1992 edition of *Air Force Manual 1-1*. Kent R. Laughbaum, *Synchronizing Airpower and Firepower in the Deep Battle* (Maxwell AFB: Air University Press, 1999), 55.

overall interdiction effort and a supporting commander when providing CAS or supporting AI to the ground component.”<sup>46</sup> U.S. Air Force counterland doctrine also describes several types of non-preplanned or flexible air interdiction options.<sup>47</sup>

Flexible air interdiction has bolstered the traditional preplanned interdiction to respond to changing battlefield conditions. Flexible air interdiction, or flex AI, provides the joint force with highly responsive airpower, flexibly employed, to meet the demands of high tempo combat and highly reactive peace enforcement operations. Preplanned interdiction remains the preferred method, but may lack the responsiveness to support the ground commander’s priorities. In this case, the JFACC may use a combination of preplanned and flexible air interdiction as a means to achieve the desired effects. To improve responsiveness even further, commanders may use onboard or off board sensor information to retarget flexible air interdiction missions. The rapid advancement of sensor-to-shooter datalinks and improved battlespace awareness is making real-time targeting even more productive. Flexible air interdiction can be reactive or proactive, depending on the ability of the Joint Force Commander to forecast changing battlefield conditions, which are unsuited to preplanned efforts. Reactive interdiction may take the form of airborne mission diverts or rerole.

## **REACTIVE AIR INTERDICTION**

If command elements detect a target requiring immediate attack, the Aerospace Operations Center (AOC) may divert an airborne mission to attack it.<sup>48</sup> Diverting refers to changing a mission’s target, while the mission-type remains the same. For example, the Air Operations Center may divert a F-15E Strike Eagle enroute to munitions storage bunker, to strike armored forces moving into an exclusion zone, threatening protected areas. The fighter crew, unable to

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<sup>45</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 3.

<sup>46</sup> *Ibid.*, 2.

<sup>47</sup> *Ibid.*, 27.

<sup>48</sup> U.S. Air Force documents previously referred to Aerospace Operations Centers as Air Operations Centers.

conduct comprehensive planning for the new target, must act quickly to strike with the desired effects. While such occurrences are common in combat, they present significant challenges to the aircrews. The authority to retarget missions that support the overall joint force normally rests with the JFACC. This typically includes the bulk of the “theater-wide AI” missions. For air interdiction missions flown in direct support of ground units, and for most CAS, retargeting authority is normally delegated to the Air Support Operation Centers (ASOC) who can best respond to fluid changes in the battlefield situation and the changing needs of the ground component.<sup>49</sup> During small-scale peace enforcement, a full ASOC may not deploy. In this case, the AOC retargets air interdiction sorties. Although diverting, or retargeting, airborne missions provides highly responsive airpower, it may have significant second order effects and is only used in extreme circumstances.

When the controlling agency changes the mission of an aircraft, for example from CAS to AI, the mission is rerolled. The AOC normally retains the authority to rerole AI missions, while the JFACC may delegate this authority to the ASOC for CAS missions. When the JFACC expects a significant amount of AI to target the enemy short of the FSCL, or otherwise come under the control of the ASOC, he may delegate some authority to rerole missions between CAS and AI to the ASOC.<sup>50</sup> While rerolling CAS sorties to provide flexible air interdiction may be the easiest method from the ground commanders perspective, it may be the least efficient and most dangerous from the airman’s point of view.

The danger increases with deeper targets, as air defenses become more sophisticated and organic suppression of enemy air defenses less effective. The U.S. Air Force learned this lesson the hard way on 15 February 1991, during a deep attack against the Medinah Division of the Republican Guard. The A-10s, which had proved so deadly against close air support targets near the forward line of troops (FLOT), met heavy resistance on their deepest missions. Despite the

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<sup>49</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 69.

<sup>50</sup> *Ibid.*

heroic efforts of the pilots, Iraqi forces shot down two A-10s. Iraqi soldiers killed one pilot and captured another. A third A-10 pilot was able to recover his aircraft after it suffered major battle damage. Following these losses, General Horner restricted the A-10s to killboxes adjacent to the Saudi border.<sup>51</sup>

On the other hand, the AOC normally assigns aircraft suited to the threat scenario, packaged with SEAD aircraft to air interdiction missions. For example, an F-15E attacking an interdiction target can rapidly engage enemy fighters and use high-speed tactics to limit exposure to air defense threats. The survivability of advanced fighters is particularly important in the risk-intolerant environment typical of peace enforcement operations. An A-10, retooled from CAS, does not have the benefit of on-board air-to-air radar, advanced air-to-air missiles or supersonic speeds. Additionally, an aircraft configured for a CAS mission may not be equipped with the optimum weapons to deal with the interdiction target.<sup>52</sup> Although suitable for maintaining the high tempo attack during Operation Desert Storm, ground commanders should not assign CAS sorties to deep targets to mask coordination problems, or as a substitute for integrated air interdiction. Proactive air interdiction may provide a more suitable solution.

## **PROACTIVE AIR INTERDICTION**

When the JFACC determines that preplanned air interdiction cannot meet the ground component commander's priorities, he may build flexibility into his interdiction plan, proactively. Innovative airmen developed many of the techniques now used "on-the-fly" during Operation Desert Storm. They borrowed concepts long in use for close air support and air superiority. One such method is air or ground interdiction alert. Just as an air-to-air fighter does not know the specifics of his target before takeoff, neither does the interdiction mission on air or ground alert.

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<sup>51</sup> William Andrews, *Airpower against an Army: Challenge and Response in CENTAF's Duel with the Republican Guard* (Maxwell AFB: Air University Press, 1998), 61.

<sup>52</sup> During Operation Desert Storm, controllers routinely directed CAS missions to targets well beyond the close fight. In VII Corps, CAS missions were often flown against interdiction targets 20-40 KM forward of

The ground crew configures the aircraft with a generic weapon load to respond to the most likely target. If the planners know the target type, for example unlocated mobile rocket-launchers, they can select a suitable weapon load. If the target type cannot be determined, they may order a mixed load to provide the most flexibility. For example, an F-15E on interdiction alert may be loaded with six CBU-87 combined effects munitions<sup>53</sup> and four laser guided bombs. The aircraft then waits, on either ground or airborne alert, until a priority target emerges. If a large enemy push is expected, alert interdiction provides a highly responsive and capable means to disrupt, delay or destroy the advancing forces. This type of flexible air interdiction is ideally suited to peace enforcement, where targets may or may not develop.

The urgency of the target determines the level of planning accomplished before the attack. For a time sensitive target an aircraft on airborne alert may strike with virtually no specific planning, using preplanned standard tactics. Conversely, the AOC may task ground alert aircraft in the ATO without specific target information, anticipating that tasking agencies will develop a suitable target before takeoff. Like the airborne alert aircraft, the ATO normally specifies a representative weapons load to cover the expected target types for these aircraft. After the AOC validates the target, the current operations section passes it to the Wing Operation Center (WOC), and detailed planning begins. To the aircrew flying the mission, the result may be indistinguishable from a normal preplanned air interdiction, although it may lack some of the details normally associated with a preplanned mission, depending on the time available. If no targets emerge during this process, the AOC issues a suitable target from the joint prioritized list and the JFACC evaluates the need for further ground interdiction alert. By tasking aircraft on the

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the FLOT in order to deconflict with ground maneuver and prevent fratricide. Tom Clancy and Gen (Ret.) Fred Franks, *Into the Storm* (New York: Berkley Books, 1998), 340.

<sup>53</sup> CBU-87 is a 1,000 lb. Class cluster munitions containing 202 individual submunitions. The submunitions provide a variety of weapons effects suitable against armor, personnel, artillery and soft targets. To improve accuracy from medium to high altitude, the weapons may be fitted with the Wind Corrected Munitions Dispenser tail assembly (CBU-103). Because of its combined effects, it is well suited to alert interdiction missions. Department of the Air Force, *Technical Order 1-IM-34 Flight Manual Aircrew Weapons Delivery Manual (Non-nuclear)* (Washington, D.C.: GPO, 1997), 1-113.



ATO without developed targets, the AOC is able to respond in a controlled fashion to emerging targets.

Although the AOC does not assign targets to alert interdiction missions in the initial ATO process, they do not constitute a reserve. Ground alert missions always fly, either against developing targets or back-up targets from the joint prioritized target list. During Operation Desert Storm, F-111Fs used this process to direct precision-guided weapons against targets that the AOC discovered too late to be included in the ATO. The AOC normally tasked the 48<sup>th</sup> Fighter Wing to provide four aircraft for ground alert, usually loaded with four 2,000-pound laser guided bombs each.<sup>54</sup> In so doing, the JFACC was able to provide flexible and responsive airpower to the JFC. The targeting process for airborne interdiction alert is more complicated and occurs much more rapidly.

Airborne alert interdiction provides the joint force with a highly responsive attack capability to respond to time critical targets. However, airborne alert is a less efficient use of airpower, as aircraft may remain idle for long periods waiting for sensors to detect suitable targets. Airborne alert assets may also consume valuable air refueling tankers and other supporting aircraft. If the enemy does not present suitable targets within the time constraints, the AOC normally directs the airborne alert mission to a preplanned target or directed to perform armed reconnaissance<sup>55</sup>. Another airborne alert mission may take over the patrol, providing continuous coverage against the threatening target.

During peace enforcement operations, the same aircraft that are monitoring a no-fly zone may provide on-call air interdiction to the Land Component Commander. U.S. Air Force F-15E crews used this procedure during Operation Provide Comfort to provide emergency defensive support to

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<sup>54</sup> The author flew and planned ground alert interdiction missions during Operation Desert Storm as a member of the 48<sup>th</sup> TFW (Provisional) mission-planning cell deployed to Taif AB, Saudi Arabia from 25 August 1990 to 12 March 1991.

<sup>55</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 27.

United Nations ground forces operating within northern Iraq.<sup>56</sup> Aircrews often use these tactics to defend against theater missiles, such as Scuds. Airborne alert missions provide highly responsive proactive interdiction, but may dilute the offensive nature of airpower. During Operation Desert Storm, hundreds of F-15E Strike Eagle sorties were committed to hunting mobile Scud launchers, preventing these highly capable aircraft from striking valuable strategic and interdiction targets.<sup>57</sup>

## KILLBOX INTERDICTION

Instead of waiting for outside agencies to detect targets, armed reconnaissance seeks out targets in accordance with priorities established by the ground component commander. This mission, among the first assigned to aircraft, and has continued to evolve. Aircrews plan armed reconnaissance missions against a particular area, rather than a particular target.<sup>58</sup> These areas are often referred to as killboxes, and are used in virtually every theater today. Commanders use killboxes, like engagement areas, to rapidly identify an area, clear of friendly forces, where attack assets can detect and attack targets without the close control of a controlling agency.<sup>59</sup>

Although the joint force uses killboxes extensively, current U.S. doctrine does not represent them well. This has led to several different approaches to killbox usage. The system used in Korea is the most consistent with evolving doctrine. Combined Forces Command, *Publication 3-1.1 Killbox Operations*, defines killboxes as pre-planned airspace coordination measures, “used to focus combat power and intelligence collection assets on a particular area of the battlefield. When properly understood and employed, killboxes can speed the destruction of emerging or

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<sup>56</sup> The author planned and flew emergency defensive support missions from Incirlik AB, Turkey, while patrolling the no-fly zone over northern Iraq during Operation Provide Comfort in 1995.

<sup>57</sup> James A. Winnefeld, James A., Preston Niblack, and Dana J. Johnson, *A League of Airmen: U.S. Air Power in the Gulf War* (Santa Monica: Rand Corporation, 1994), 134.

<sup>58</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 27.

<sup>59</sup> The U.S. Air Force does not normally fly close air support missions using killboxes procedures. However, CAS missions may be rerouted to killbox AI if the situation dictates. Republic of Korea-U.S. Combined Forces Command, *Publication 3-1.1 Killbox Operations*, (Seoul: HQ Combined Forces Command, 1999), 1.

lucrative target areas or groups.”<sup>60</sup> It is important to note, that although this publication defines killboxes as preplanned airspace control measures, current joint publications specifically state that they are not, in themselves, airspace or fire control measures.

Using a standard reference system, commanders can use killboxes to rapidly shift combat power and ease deconfliction anywhere on the battlefield. The joint force uses normal airspace and fire support coordination measures in conjunction with killboxes to provide deconfliction and control. By using a common reference system, command and control agencies can rapidly pass changes to all users. *Multiservice Tactics, Techniques, and Procedures for Targeting* describes the grid-box reference system in detail. “Common reference systems result in rapid, deconflicted surface (time-critical target) TCT attacks, enhanced probability of mission success, and reduced potential for duplication of effort and fratricide. Also, they allow for the rapid coordination of joint engagement zones and the employment of combined arms.”<sup>61</sup> Although this manual specifically mentions time critical targets, killboxes are well suited to wide array of targets.

To improve the effectiveness of killbox AI, specially trained aircrews locate and verify targets. Called Killer Scouts, these crews are capable of providing very detailed target updates to air interdiction flights. Some Killer Scouts are capable of marking targets with rockets or laser designators. Like an airborne traffic cop, the Killer Scouts can direct and sequence air interdiction missions flowing into killboxes. Most importantly, the Killer Scout provides prioritized targeting guidance, updated in real-time, to maximize the effect of each sortie. Acting as hunter-killer teams, these missions can reconnoiter areas of interest searching for and destroying high value targets as they locate them.<sup>62</sup> Although the Killer Scout mission is similar to that of the airborne Forward Air Controller (FAC-A), U.S. Air Force training programs do not

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<sup>60</sup> Republic of Korea-U.S. Combined Forces Command, *Publication 3-1.1 Killbox Operations*, (Seoul: HQ Combined Forces Command, 1999), 1.

<sup>61</sup> Air Land Sea Application Center, *Targeting: The Joint Targeting Process and Procedures for Targeting Time-Critical Targets* (Washington, DC: GPO, 1997), II-14.

<sup>62</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 8.

normally qualify Killer Scouts to provide terminal control and therefore, they do not control aircraft in close proximity to friendly ground forces.<sup>63</sup>

The Killer Scout concept was the rebirth of the Viet Nam era “Fast FAC”, adapted to the challenges of Operation Desert Storm. Flying the multirole F-16C Fighting Falcon, the Killer Scouts were able to quickly pass targeting information, weather and threat updates to attacking flights. In order to apply continuous pressure on an enemy, the AOC may schedule succeeding interdiction missions to cover long periods, similar to push-CAS in concept. Called flow-AI, the appropriate command and control agency directs these missions to specific areas once airborne. The U.S. Air Force conducted numerous flow-AI missions with great success during Operation Desert Storm using a variety of aircraft. In fact, these missions became so routine that the aircrews jokingly referred to the allotted time in the killbox as their “range time”, a reference to peacetime training procedures used on air-to-ground bombing ranges.<sup>64</sup> By utilizing the continuous coverage provided by flow-AI, a commander may prevent the enemy from organizing any operations in a specific geographic area without decisive aerial interference. This example of the flexible use of interdiction may support the ground commander’s intent to prevent organized enemy counterattack or prevent reinforcement of engaged forces, and has tremendous application in peace enforcement. However, unlike preplanned air interdiction, these missions are not dependent on the lengthy target nomination process for success. Airpower is able to operate inside the enemy’s decision cycle and deny him options while capitalizing on airpower’s ability to rapidly mass effects.

The versatility and flexibility of airpower, when properly applied, can yield tremendous advantage to the joint force. By understanding the demands of the mission at hand and the range of flexible options, the commander may apply air interdiction, across the entire spectrum of conflict. However, flexibility is only one factor in providing effective air interdiction to the

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<sup>63</sup> Ibid., 54.

<sup>64</sup> Author’s notes from Operation Desert Storm, Taif AB, Saudi Arabia, 25 August 1990 to 12 March 1991.

ground component conducting peace enforcement. Air interdiction must be responsive to the ground commander's needs. This requires unity of effort and appropriate control mechanisms.

## CHAPTER THREE

### IMPERATIVES: UNITY OF EFFORT AND RESPONSIVENESS

“The nature of modern warfare demands that we fight as a team.... The resulting team provides joint force commanders the ability to apply overwhelming force from different dimensions and directions to shock, disrupt, and defeat opponents. Effectively integrated joint forces expose no weak points or seams to enemy action, while they rapidly and efficiently find and attack enemy weak points. Joint warfare is team warfare.”<sup>65</sup>

The previous chapter demonstrated the tremendous flexibility of air interdiction, fully supported by U.S. Air Force counterland doctrine. However, as the monograph concluded in chapter one, unity of effort and responsiveness are imperative if air interdiction is to effectively support peace enforcement. The dynamic environment of peace enforcement, characterized by complexity, ambiguity and uncertainty, requires commanders to work closely with outside agencies and components. While unity of command is rarely possible in peace operations, unity of effort is vital.<sup>66</sup>

Achieving unity of effort requires both formal structure and informal relationships between elements of the joint team. The analysis begins with the formal mechanisms that control air interdiction in the peace enforcement environment. Specifically, the author explores the integration of air interdiction with ground operations and the organizations responsible for this interface. Next, this chapter briefly discusses the importance of informal relationships that build trust and teamwork. Only through effective formal control mechanisms and informal personal relationships can the commander charged with peace enforcement achieve true unity of effort, enabling the third criteria for effective air interdiction in peace enforcement operations,

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<sup>65</sup> Joint Chiefs of Staff, *JP 1 Joint Warfare of the Armed Forces of the United States* (Washington, D.C.: GPO, 1995), i.

<sup>66</sup> Joint Chiefs of Staff, *JP 3-07 Joint Doctrine for Military Operations Other than War* (Washington, D.C.: GPO, 1995), II-3.

responsiveness. Since responsiveness is impossible without unity of effort, this chapter will begin by examining the latter.

## UNITY OF EFFORT

“To accommodate this complexity and obtain unity of effort, commanders need to effect liaison and coordination at each echelon of the command chain, as well as among the various aviation units and command centers involved in the operation.”<sup>67</sup>

The first requirement in achieving unity of effort is effective coordination and liaison between the major actors. During World War II, the U.S. Army and Air Force developed a balanced system formally aligning tactical air commands with the field armies they supported. Although the commanders often held different ranks, they were able to coordinate their activities to promote unity of effort. This balance between air and land components, achieved through horizontal integration, was upset in 1973, when General Creighton W. Abrams, Army Chief of Staff, eliminated the field army as an echelon of command, anticipating that army units would fall under an established NATO command structure. The goal was to maintain combat power, while meeting mandated troop reductions following the Vietnam War.<sup>68</sup> The elimination of the field army meant that the army Corps would now be responsible for integrating airpower with land combat operations, beyond simply close air support.

The U.S. Army staff quickly recognized the problem created by the demise of the field army, and in 1974, proposed the establishment of an army tactical air support liaison element within the Air Component Commander’s Tactical Air Control Center (TACC).<sup>69</sup> This arrangement did not provide the detailed coordination required, especially when more than one corps deployed in the

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<sup>67</sup> Dean Simmons, Phillip Gould, Verena Vomastich and Philip Walsh, “Air Operations over Bosnia,” *Proceedings* (May 1997): 60.

<sup>68</sup> Harold R. Winton, “An Ambivalent Partnership: US Army and Air Force Perspectives on Air-Ground Operations, 1973-1990,” in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger, (Maxwell AFB: Air University Press, 1997), 411-414. See also: Richard M. Swain, *Lucky War: Third Army in Desert Storm* (Fort Leavenworth: USACGSC Press, 1994), 20.

<sup>69</sup> After Operation Desert Storm, the U.S. Air Force renamed the Tactical Air Control Center (TACC) the Air Operations Center (AOC).

same theater. A solution reached two years later created the Battle Coordination Element (BCE) from the unsuccessful Army TACC element. Additionally, the U.S. Army established Air Force liaison elements at each corps headquarters. In analyzing this arrangement in the Blue Flag exercise of December 1977, the Army's Training and Doctrine Command (TRADOC) found that while the liaisons provided adequate representation of Army and Air Force concerns, the arrangement was not ideal.<sup>70</sup>

The TRADOC air-land interface study, published in 1978, raised two important issues, which would significantly affect the application of air interdiction in Operation Desert Storm. First, it pointed out that corps commanders needed to communicate directly with the Air Component Commander regarding the redistribution of air support sorties among the corps. More importantly, it concluded that mere liaison at the corps level could not provide the detailed interface the corps required. The corps commanders in NATO, who worked under a very different relationship, shared this opinion.<sup>71</sup> To improve the horizontal integration between air and land operations, the services developed more robust coordination elements. The most important of these in providing effective air interdiction during peace enforcement is the Battlefield Coordination Detachment (BCD).

The Battlefield Coordination Element (BCE), first fielded in 1976, did not meet the needs of the Army during Operation Desert Storm. The *Tait Report* found the BCE lacking in communications capability and manning. In response, the Army enlarged the BCE and formed

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<sup>70</sup> Harold R. Winton, "An Ambivalent Partnership: US Army and Air Force Perspectives on Air-Ground Operations, 1973-1990," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger, (Maxwell AFB: Air University Press, 1997), 413.

<sup>71</sup> NATO continued to base air operations upon mutually supporting relationships between equal levels of command. The 1984 edition of *U.S. Air Force Manual 1-1 Basic Aerospace Doctrine* emphasized centralized control and decentralized execution without specifying the command levels associated with each. As such, it was not congruent with contemporary NATO doctrine. Allied tactical air forces in NATO had the responsibility of supporting their associated army groups in a manner reminiscent of World War II. The supporting Air Forces provided offensive air support to the Army group commander in the form of close air support and battlefield air interdiction. Ibid. See also Maris McCrabb, "The Evolution of NATO Air Doctrine," in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger, (Maxwell AFB: Air University Press, 1997), 456-460.



the Battlefield Coordination Detachment.<sup>72</sup> The BCD, normally located within the Joint Air Operations Center (JAOC), “processes Army requests for tactical air support, monitors and interprets the land battle situation for the JAOC, and provides the necessary interface for the exchange of current intelligence and operational data.”<sup>73</sup> Although normally associated with higher levels of command, the Army service component commander may tailor the BCD to support a corps or division commander’s operations.<sup>74</sup> While the Army designed the BCD to support large-scale combat operations in a mature theater, the commander may deploy task-organized cells to support specific smaller-scale operations. The coordination and support needed by the Army commander and his concept or vision of the joint operation will largely determine the size and composition of the BCD, within deployment constraints.<sup>75</sup> Such tailoring is vital if the BCD is to support Army divisions conducting peace enforcement.

U.S. Army Field Manual 100-13, *Battlefield Coordination Detachment*, contains an entire chapter on BCD support to contingency missions, such as peace enforcement. According to this doctrine, “the BCD is the key to synchronized contingency operations.” The manual notes that these operations are becoming increasingly common, and may now represent the norm, rather than the exception. It describes post-cold war contingency operations as,

“...Often highly visible and politically sensitive. They are characterized by the ‘surgical’ use of air assets and high-level concern about the collateral damage effects of friendly air attacks. For these reasons, the JAOC expects detailed information about Army operations. The BCD must be prepared to provide this information in addition to supporting other doctrinal functions.”<sup>76</sup>

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<sup>72</sup> Kent R. Laughbaum, *Synchronizing Airpower and Firepower in the Deep Battle* (Maxwell AFB: Air University Press, 1999), 50.

<sup>73</sup> Joint Chiefs of Staff, JP 1-02, *DOD Dictionary of Military and Associated Terms* (Washington, D.C.: GPO, 1994), 56.

<sup>74</sup> Department of the Army, *Field Manual 100-13 Battlefield Coordination Detachment* (Washington, D.C.: GPO, 1996), 1-1.

<sup>75</sup> BCD manning to support contingency operations depends on the size of the operation, the structure of the Theater Air-Ground System (TAGS), designation of a JFACC, size of the JAOC function, enemy strengths and capabilities, and extent of air support requirements. *Ibid.*, 5-1.

<sup>76</sup> Department of the Army, *Field Manual 100-13 Battlefield Coordination Detachment* (Washington, D.C.: GPO, 1996), 5-1.

For the Army division conducting peace enforcement, the BCD plays a critical role. As the senior Army commander's representative to the air component, the BCD provides the horizontal integration required to achieve unity of effort. However, the formal relationship between the land and air components, provided by the BCD, is just part of the formula. Commanders and staffs must build trust and teamwork through personal relationships as well.

Ideally, the air and ground commanders work together, starting with the Joint Force Commander's intent and objectives, to develop a coordinated campaign plan.<sup>77</sup> Coordination between air and ground commander's is most important during peace operations, where the actions of one can have tremendous second order effect on the other. For example, in April and early May 1995, Serbian forces intensified their attacks in Bosnia, shelling the cities of Bihac and Sarajevo. After the Serbs refused to withdraw the heavy weapons, the United Nations responded with air attacks, destroying Serbian ammunition bunkers near Pale. The Bosnian Serbs recognized the impact of the attack on their finite war stocks, and swiftly and indiscriminately reacted by shelling Sarejevo, Bihac, and several other villages. To deter further air attack, the Serbs took 300 UN troops as human shields. The commentary appearing in the *London Times* blamed, "those who ordered the air strikes...for the deaths of dozens of young people in Tuzla when Serbs retaliated, and for the subsequent fate of the UN hostages."<sup>78</sup> Although, other

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<sup>77</sup> During Operation Desert Storm, General Schwarzkopf acted as both the Joint Force Land Component Commander (JFLCC) and the Joint Force Commander (JFC). General Schwarzkopf made this decision to avoid the significant cultural issue of placing Arab-Islamic troops under an American land commander. General Schwarzkopf choose this arrangement to prevent cultural complications, since the commander of the Arab-Islamic forces, Lieutenant General Khalid bin Sultan, was political equal. Unfortunately, the principle of unity of command suffered in the process. Robert H. Scales, BG, *Certain Victory: The US Army in the Gulf War* (Fort Leavenworth: USACGSC Press, 1994), 140. Authorities recognized the dysfunctional operations of unbalanced command arrangements long before Operation Desert Storm. Problems between service components in the early stages of World War II led the Joint Chiefs of Staff to issue a directive concerning unified command of joint forces. This document, released in April 1943, stated that a joint force commander would not function in a dual capacity as joint force commander and as commander of a component of his force, unless so directed by the Joint Chiefs of Staff. See U.S. Army Command and General Staff College Department of Joint and Multinational Operations, "Joint Chiefs of Staff Directive for Joint Operations, 20 April 1943 (JCS 263/2/D)," in *A534 Joint Force Command Syllabus/Book of Readings* (Fort Leavenworth: USACGSC, 1999), M2-8-1.

<sup>78</sup> Tony Mason, "Operations in Search of a Title: Air Power in Operations Other than War," in Richard Hallion, ed., *Air Power Confronts an Unstable World* (London: Brassey's, 1997), 168.

significant issues complicated the use of force in Bosnia, this example serves to illustrate the importance of personal relationships between the air and ground commanders.

Close coordination between the ground and air components might have prevented the air attacks just described from having such adverse impact on the ground situation. This is especially important when the soldiers on the ground are acting as peacekeepers, while the airmen are conducting peace enforcement missions. In his essay, *Bombing in the Service of Peace: Sarajevo and Gorazde, Spring 1994*, retired Canadian Army Major Roy Thomas, described the results of mixing peacekeeping with aerial peace enforcement.

“Around Sarajevo itself, UN military observers found themselves in a changed atmosphere as a result of the Gorazde air strikes. The armed JCOs [Joint Commission Officers] who had called in the air strikes had been identified as unarmed military observers which put all the military observers under suspicion as no longer being impartial. Moreover, the days as hostages had strained personal relations, and trust, between military observers and their Bosnian Serb keepers. The impact of the Gorazde air strikes reached beyond the Drina basin to put in doubt the impartiality of UN personnel throughout Bosnia.”<sup>79</sup>

Major Thomas suggested that the air strikes be “coupled with a psyops campaign to explain to Bosnian Serbs why their friends and relatives were being attacked by NATO aircraft near Gorazde.”<sup>80</sup> Integrated air and ground campaigns, utilizing both lethal and non-lethal means are the best means to achieve unity of effort in peace enforcement operations. To achieve this, commanders must be able to discuss their respective operations in light of a common aim, in an environment of mutual respect and trust.

The teamwork displayed in the European Theater of Operations during World War II has become the high-water mark for personal relationships between air and ground commanders. Lieutenant General George S. Patton provided mission-type orders to his associated air commander, Brigadier General O.P. Weyland, instructing him to screen the flank of his Third Army as he raced across Germany. General Patton trusted his air commander with a very

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<sup>79</sup> Roy Thomas, “*Bombing in the Service of Peace: Sarajevo and Gorazde, Spring 1994*,” *Aerospace Power Chronicles* (Spring 1994): 8.

<sup>80</sup> Ibid.

important mission, and General Weyland's XIX Tactical Air Command delivered, in spite of doctrine severely lacking for such operations.<sup>81</sup> Speaking to the press before their final joint offensive in mid-December 1944, General Patton emphasized the strength of their relationship, explaining that, "no operation is contemplated without General Weyland and his staff being present." Taking his cue, General Weyland singled out the main reason for their success. He explained that Third Army staff people understood, "not only the capabilities...of air, but also the limitations." General Weyland provided sound advice when he remarked, "Our success is built on mutual respect and comradeship between the air and ground." The difference in rank, age and combat experience did not prevent Lieutenant General Patton and Brigadier General Weyland from establishing a close personal relationship. The mutual respect and trust between these two commanders allowed them to achieve unity of effort unmatched since.<sup>82</sup> Although this example concerns higher-level commanders, the lesson applies equally well to air and ground commanders at all levels.

Achieving unity of effort requires both formal structure and informal relationships between elements of the joint team. This section examined the formal mechanisms that control air interdiction in the peace enforcement environment. The Battlefield Coordination Detachment facilitated horizontal integration, and promoted effective coordination and liaison between the air and ground commanders. Using the relationship between Generals Patton and Weyland as example, the chapter highlighted the importance of informal relationships to build trust and teamwork. Together, formal structure and informal relationships ensure that the actions of air and

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<sup>81</sup> U.S. tactical air doctrine was evolving during this period. The main sources were *FM 31-35 Aviation in Support of Ground Forces* and *FM 100-20 Command and Employment of Airpower*. Field commanders had to adapt this doctrine flexibly in order to meet the demands of rapid offensive warfare. One of the main problems was communications between ground and air units. David Spires, "Patton and Weyland: A Model for Air-Ground Cooperation," in, Daniel R. Mortensen, ed., *Airpower and Ground Armies* (Maxwell AFB: Air University Press, 1998), 147.

<sup>82</sup> David Spires, "Patton and Weyland: A Model for Air-Ground Cooperation," in, Daniel R. Mortensen, ed., *Airpower and Ground Armies* (Maxwell AFB: Air University Press, 1998), 147-163.

land forces contribute towards a common goal, and makes possible the other criteria for effective air interdiction in peace enforcement: responsiveness.

## **RESPONSIVENESS**

To fully support the ground commander conducting peace enforcement, air interdiction must be responsive to his needs. Responsiveness requires air interdiction to deliver the desired effects, on the correct target, within the time constraints established by the ground commander. This requires a clear understanding and acceptance of command relationships, and the capability to provide the desired support. Before examining the command and control process for air interdiction, this section will review the command relationships between the air and ground commanders.

The commander on the ground normally has the most complete understanding of the situation and is in the best position to guide the efforts of the joint force. Even if operations begin with airpower alone, the nature of peace enforcement missions, suggest that ground troops will be necessary to achieve success. Consequently, the ground component commander is normally the supported commander. U.S. Air Force doctrine for military operations other than war recognizes the supporting role close air support and air interdiction plays in these operations.<sup>83</sup> According to U.S. Air Force doctrine, “the JFACC, who is normally also the COMAFFOR, is the supported commander for the JFC’s overall air interdiction effort and a supporting commander when providing CAS or supporting AI to the ground component.”<sup>84</sup>

Supporting the Army has been an Air Force mission from the earliest days of the service. While some have questioned the Air Force’s commitment to this important mission, senior Air Force commanders have stressed the importance of air support. The former commander of Tactical Air Command, General Robert Russ, noted that, “everything that tactical air does

directly supports Army operations.”<sup>85</sup> Addressing the aircrews on the eve of the Desert Storm ground campaign, the JFACC, General Horner, put it even more clearly,

“The ground war has started. Our number one job is support of the ground forces. Close air support and air interdiction missions are not weather cancelled by some decision maker removed from the scene. The time has come for every flight lead to make every reasonable effort to attack the target and get his flight back home. Our ground guys are depending on every sortie. From now on, it is up to every aviator to make it happen.”<sup>86</sup>

It takes more than desire to provide responsive air interdiction to the ground component commander. The air component must have a highly capable command and control system to rapidly direct air interdiction operations. Not everyone believed this was possible. Among the doubters was former U.S. Air Force Chief of Staff General Merrill McPeak. He commented, “It is a disgrace that modern air forces are still shackled to a planning and execution cycle that lasts three days. We have hitched our jets to a hot air balloon. Even when this lackluster C2 system works properly, we are bound to forfeit much of the combat edge we know accrues to airpower because of its flexibility and speed of response.”<sup>87</sup> Paradoxically, the Air Force credits its command and control system with providing flexibility and responsiveness.<sup>88</sup>

The prime tenant of aerospace power is centralized control and decentralized execution. Centralized control ensures that limited airpower resources are available to mass against decisive points and respond to changing priorities at the operational level. Centralized control of airpower, normally by the JFACC, promotes unity of effort and adheres to the principle of unity

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<sup>83</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 11.

<sup>84</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 2.

<sup>85</sup> Harold R. Winton, “An Ambivalent Partnership: US Army and Air Force Perspectives on Air-Ground Operations, 1973-1990,” in *The Paths of Heaven: The Evolution of Airpower Theory*, ed. Phillip S. Meilinger, (Maxwell AFB: Air University Press, 1997), 425.

<sup>86</sup> William Andrews, *Airpower against an Army: Challenge and Response in CENTAF's Duel with the Republican Guard* (Maxwell AFB: Air University Press, 1998), 63.

<sup>87</sup> General Merrill McPeak was the USAF Chief of Staff from 1990 to 1994. Merrill A. McPeak “For the Composite Wing,” *Airpower Journal* (Fall 1990): 7.

<sup>88</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 23.

of command.<sup>89</sup> While centralized control promotes unity of effort, only decentralized execution can provide the flexibility and responsiveness demanded by peace enforcement operations. Air Force doctrine defines decentralized execution as the delegation of execution authority to responsible and capable lower-level commanders to achieve effective span of control and to foster initiative, situational responsiveness, and tactical flexibility. Flight leaders, mission commanders and support teams execute air missions across the entire battlespace, able to respond to changing situations and a reacting enemy. Centralized control and decentralized execution exploits airpowers inherent flexibility.<sup>90</sup> The key agency responsible for controlling air interdiction is the Joint Aerospace Operations Center (JAOC).<sup>91</sup>

“The Joint Aerospace Operations Center is the senior operations center and focal point for air and space operations planning and execution for the joint task force.”<sup>92</sup> The JAOC is comprised of four divisions, strategy, combat plans, combat operations, and air mobility. The Air Component Commander may tailor the JAOC to suit the requirements of contingency missions. During peace enforcement operations, one of the primary roles of the JAOC is integrating air and ground operations, including air interdiction targeting. The JAOC is the heart of the Theater Air-Ground System (TAGS). “The TAGS is a system of systems, a synergy of the various component air-ground systems, orchestrating the planning and execution of air-ground operations.”<sup>93</sup>

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<sup>89</sup> Joint doctrine promoting centralized control of airpower grew naturally from the Goldwater-Nichols Defense Reorganization Act of 1986, culminating with the appointment of Lieutenant General Charles Horner as the Joint Force Air Component Commander (JFACC) during Operation Desert Storm. *Joint Publication 3-56.1 Command and Control of Joint Air Operations* formalized the JFACC concept for centrally controlled airpower. Joint Chiefs of Staff, *JP 3-56.1 Command and Control for Joint Air Operations* (Washington, D.C.: GPO, 1994), vi.

<sup>90</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 23.

<sup>91</sup> U.S. Air Force documents previously referred to Aerospace Operations Centers as Air Operations Centers.

<sup>92</sup> Department of the Air Force, *AFI13-1AOCV3 Operational Procedures-Aerospace Operations Centers* (Washington, D.C.: GPO, 1999), 16.

<sup>93</sup> Air Land Sea Application Center, *Multiservice Procedures for the Theater Air-Ground System*. (Washington, D.C.: GPO, 1998), i.

Air interdiction supporting the ground component commander operates within the Theater Air-Ground System. While the Air Component Commander normally delegates targeting authority for close air support missions to lower level elements of the TAGS, the JAOC normally retains targeting authority for all AI missions.<sup>94</sup> Additionally, although interdiction missions may require detailed integration with ground forces, the Air Force never performs air interdiction in close proximity to friendly troops. Preplanned air interdiction may have little value in peace enforcement, and the JFACC may instead provide the types of flexible air interdiction described in chapter two to support the ground commander. The JFACC centrally controls flexible air interdiction sorties, principally through the joint or combined Aerospace Operations Center. The JFACC's principle control mechanism is the air tasking order, or ATO, which the JAOC staff formulates and executes according to his guidance. According to U.S. Air Force instructions on Aerospace Operations Centers,

“The ATO must be written with sufficient flexibility to meet the ever-changing situation but with sufficient preplanning to allow units and support elements to plan their aircraft, aircrew, and support requirements. The complexity of air operations and the threat being faced are the two most significant problems in designing flexible operations. Designating alternate targets or missions is one of many methods of capitalizing on the inherent flexibility of air power without compromising the aircrew's requirement for pre-mission planning and threat analysis.”<sup>95</sup>

The ATO labels flexible air interdiction missions as XINT or XAI to differentiate them from preplanned missions.<sup>96</sup> Special instructions (SPINS) and unit remarks contained in the ATO outline the specific procedures the aircrew will use for each mission. For example, the SPINS may direct the aircrew to contact the Airborne Battlefield Command, Control and Communications (ABCCC) aircraft for killbox assignment and a Killer Scout for target priorities. Some officers have criticized the ATO, with its lengthy targeting cycle, for being too inflexible to deal with the needs of the ground commander. Indeed, the Air Force designed the current ATO

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<sup>94</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 52.

<sup>95</sup> Department of the Air Force, *AF113-1AOCV3 Operational Procedures-Aerospace Operations Centers* (Washington, D.C.: GPO, 1999), 32.



process to accommodate fixed targets with known vulnerabilities, identified 48 to 72 hours before execution. This process is not well suited to peace enforcement operations, with mobile, time sensitive and unplanned targets. To support the needs of the ground commander, a more flexible system was required.

The U.S. Air Force addressed the conflict between flexibility and control in two ways. First, organizational changes and improved education and training have improved the planning and targeting processes to shorten the time between target nominations and execution for fixed targets. Secondly, and more importantly, dedicated officers have made the ATO process flexible enough to deal with rapidly changing situations. Responding to the demands of Operation Deliberate Force, the United States Air Forces in Europe developed an innovative concept for managing change. Called flexible targeting, members of the 32<sup>nd</sup> Air Operations Group improved this process during Operation Allied Force. The U.S. Air Force incorporated portions of this process into operational procedures for Air Operations Centers, charging the Time Critical Targeting Team with the responsibility to “re-role forces in reaction to enemy action, weather changes, critical supply and personnel needs, friendly forces becoming isolated, and to meet medical evacuation requirements.”<sup>97</sup> Without changing the ATO timeline, the concept identifies “windows of change” within the current process.

The combat operations branch, with the help of the BCD, recommends changes to the ATO after the JFACC has published it. The Chief of Combat Operations then filters the changes through the Master Air Attack Plan chief to ensure compliance with the JFACC’s intent.<sup>98</sup> During ATO execution, the flexible targeting team, within the current operations division, handles changes, including retargeting of airborne missions. Flexible targeting requires a clear understanding of the JFC’s strategy and intent. From this, the JFACC allocates air assets using

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<sup>96</sup> Ibid., 115.

<sup>97</sup> Department of the Air Force, *AF113-1AOCV3 Operational Procedures-Aerospace Operations Centers* (Washington, D.C.: GPO, 1999), 46.

<sup>98</sup> Mike Householder, LTC, of Hurlburt AFB, interview by author, 18 May 2000, Hurlburt AFB.

the strategy to task methodology. The JFACC applies priority and weight of effort to specific tasks to achieve desired results. This allows the planning process to continue without specific target inputs. The combat plans branch conducts initial planning based on tasks, desired results, general target type and anticipated timing and target location.<sup>99</sup>

The air planning process is flexible enough to accept the actual details virtually anytime up to execution. Without this type of planning, the ATO becomes a slave to the target list and the JFACC is unable to exploit airpower's inherent flexibility. To be effective, air interdiction targeting in peace enforcement must reflect the ground commander's priorities. According to U.S. Air Force doctrine, "when flexible AI is flown in direct support of the ground component, the target priorities should reflect those established by the ground component and communicated via the battlefield coordination detachment or the theater air-ground system."<sup>100</sup> The BCD must be able to react quickly to emerging air support requests from the division's Deep Operations Coordination Cell (DOCC).

The Deep Operations Coordination Cell, "plans, coordinates, synchronizes, and executes the division's deep operations."<sup>101</sup> Although the DOCC is an ad hoc organization at the division level, at least two divisions have cited it as a major factor in the success of their deep operations.<sup>102</sup> When conducting peace enforcement operations, the role of the DOCC in passing targeting information to the JAOC through the BCD becomes vital. For example, Task Force Hawk, deployed to support the joint campaign against ethnic cleansing in Serbia, "enjoyed immense success tracking targets using UAVs, and sending this targeting data to the CAOC<sup>103</sup> for attack."<sup>104</sup> The link-up between the division's DOCC and the BCD provides the ground

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<sup>99</sup> 32<sup>nd</sup> Air Operations Squadron, USAFE, "Flexible Targeting Briefing," 1997.

<sup>100</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 27.

<sup>101</sup> Department of the Army, *FM 71-100 Division Operations* (Washington, D.C.: GPO, 1996), 3-7.

<sup>102</sup> Ward, William E. and James A. Kelley, "Expanding the Role of the DOCC (DOCC Around the Clock)," *Center for Army Lessons Learned: News from the Front*, May-June 2000, 4.

<sup>103</sup> CAOC (Combined Air Operation Center) refers to a multinational Air Operations Center.

<sup>104</sup> Mark Segovis and Robert Salvatore, *Deep Operations Coordination Cell (DOCC)*, *Center for Army Lessons Learned Newsletter* 00-8.

commander with the means to rapidly pass air interdiction targets to the JAOC for execution. Although formal doctrine for this process is lacking, recently published after-action reports from Task Force Hawk provide excellent techniques and proposals to improve the responsiveness of air interdiction in support of peace enforcement.<sup>105</sup>

Responsiveness requires that commanders clearly understand the command relationship. “Commanders must understand the battle from the perspective of both the supported and supporting commanders. This thorough understanding of intent promotes unity of effort.”<sup>106</sup> Unity of effort, made possible by horizontal integration and personal relationships, enables responsiveness. Responsiveness, in turn, demands both the desire and the capability to provide support. For the division conducting peace enforcement, the key elements are the Battlefield Coordination Detachment and the Deep Operations Coordination Cell. Through these interfaces, the JFACC is able to target flexible air interdiction to support the ground component commander.

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<sup>105</sup> Ibid. The U.S. Army’s primary doctrine for targeting does not mention the role of the DOCC in the targeting process. See Department of the Army, *FM 6-20-10 Tactics, Techniques, and Procedures for the Targeting Process* (Washington, D.C.: GPO, 1996). For an excellent review of the BCD’s role in this process, see Robert S. Bridgesford and Luke G. Grossman, “BCD Targeting for Operation Allied Force,” *Field Artillery Journal* (January/February 2000): 14-19. According to one researcher, “the primary doctrinal barrier was the lack of an operational framework for Army Attack Aviation to integrate with the joint air operations center outside of the Corps structure.” Sharon L. Holmes, “Army Attack Aviation and Joint Air Operations: Doctrinal and Institutional Barriers” (Monograph, School of Advanced Military Studies, 1999), 37.

<sup>106</sup> Department of the Army, *Field Manual 100-13 Battlefield Coordination Detachment* (Washington, D.C.: GPO, 1996), 1-3.

## CHAPTER FOUR

### EFFECTIVE AIR INTERDICTION IN PEACE ENFORCEMENT

Since the first use of aircraft to quell colonial uprisings by the Royal Air Force in 1919, airpower has become a common component of peace operations. Peace operations include support to diplomacy, peacekeeping and peace enforcement. Airpower can contribute to all three types of peace operations. Air Vice-Marshal Tony Mason, now a professor of aerospace policy at the University of Birmingham, believes that air power is, “particularly suited to the complex political sensitivities of intervening powers and the vulnerabilities of belligerents.” He goes on to state that, “Offensive air power can deny a belligerent the ability to concentrate his own ground forces or to move them confidently into excluded territory. Thereby, air power confers escalation dominance on the interveners.”<sup>107</sup> What the Air-Marshal described is exactly what U.S. Air Force leaders designed counterland operations to do, deny freedom of movement to land forces. Escalation dominance, achieved through air interdiction, is just one of the ways in which offensive air power contributes to peace enforcement operations.

Monitoring no-fly zones has become the most common mission assigned to air forces conducting peace enforcement operations. Other missions include enforcement of sanctions and exclusion zones, protection of shipping, strikes and raids, and shows of force.<sup>108</sup> In order to perform these missions, the basic U.S. Air Force combat functions must be adapted to fit the unique environment of the peace enforcement operation.<sup>109</sup>

Although peace enforcement missions may differ considerably from traditional combat, United States Air Force doctrine provides only broad guidance on how basic functions apply to peace enforcement. U.S. Air Force Doctrine Document 2-3, *Military Operations Other Than*

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<sup>107</sup> Tony Mason, “Operations in Search of a Title: Air Power in Operations Other than War,” in Richard Hallion, ed., *Air Power Confronts an Unstable World* (London: Brassey’s, 1997), 161-162.

<sup>108</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 13-14.

*War*, states that Air Force units support peace enforcement with traditional air-to-air and air-to-ground operations, but does not describe how these operations are conducted or integrated with the joint force. Instead, the Air Force believes that normal operational doctrine provides sufficient guidance to accomplish these missions.<sup>110</sup> Several prominent authors disagree.

In an article based on remarks he made at the Air and Space Doctrine Conference in 1995, Carl H. Builder described doctrinal frontiers. He perceives a void in U.S. Air Force doctrine concerning non-traditional missions such as space, special operations, and constabulary functions.

“We are trying to apply forces and doctrine designed for fighting and winning wars to constabulary missions-and they don’t apply very well. We are not stopping the enemy from flying in the no-fly zones. We are not stopping the use of heavy weapons against sanctuaries.”<sup>111</sup>

Builder’s definition of constabulary functions includes what joint doctrine now terms peace enforcement. As he points out, these missions are, “different from fighting and winning wars. They are reactive more than proactive. They typically cede the initiative to those who would violate the rules.” Does peace enforcement represent a doctrinal frontier, or does normal U.S. Air Force operational doctrine provides an acceptable basis? In order to answer this question, the author determined three criteria for effective air interdiction in peace enforcement operations: unity of effort, responsiveness, and flexibility. The monograph examined these criteria in the preceding chapters.

U.S. Air Force doctrine defined counterland as, “operations to attain and maintain a desired degree of superiority over surface operations by the destruction, disrupting, delaying, diverting, or other neutralization of enemy forces. The main objectives of counterland operations are to dominate the surface environment and prevent the opponent from doing the same.”<sup>112</sup> Close air support and air interdiction in support of ground forces, overlap with theater-wide interdiction to

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<sup>109</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 45.

<sup>110</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 21.

<sup>111</sup> Carl H. Builder, “Doctrinal Frontiers,” *Airpower Journal* (Winter 1995): 10.

<sup>112</sup> Department of the Air Force, *AFDD 1 Air Force Basic Doctrine* (Washington, D.C.: GPO, 1997), 48.

form the counterland spectrum.<sup>113</sup> This doctrine made an important distinction between the JFC's air interdiction effort, and air interdiction in support of the ground component. It further stated that the JFACC is, "a supporting commander when providing CAS or supporting AI to the ground component."<sup>114</sup> However, supporting AI must be flexible to be effective in peace enforcement operations.

U.S. Air Force counterland doctrine describes several types of non-preplanned or flexible air interdiction options.<sup>115</sup> Flexible air interdiction provides the ground component commander highly responsive airpower to meet the demands of reactive peace enforcement operations. Options include mission diverts or reroles, air or ground alert and killbox interdiction. To improve responsiveness even further, commanders may use onboard or off board sensor information to retarget flexible air interdiction missions. The rapid advancement of sensor-to-shooter datalinks and improved battlespace awareness is making real-time targeting even more applicable to peace enforcement. Effective air interdiction to support the Army division conducting peace enforcement operations demands flexibility. U.S. Air Force doctrine provides commanders and staffs with a solid foundation to plan and execute flexible air interdiction missions. The key to unlocking the flexibility of air interdiction lies in unity of effort.

Achieving unity of effort requires both formal structure and informal relationships between elements of the joint team. The Battlefield Coordination Detachment facilitated horizontal integration, and promoted effective coordination and liaison between the air and ground commanders. U.S. Army doctrine clearly described the role of the BCD in peace enforcement and recognized that in operations of this type, the Army division may be the supported command.<sup>116</sup> Achieving unity of effort requires both formal structure and informal relationships between elements of the joint team. This chapter examined the formal mechanisms that control

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<sup>113</sup> Ibid., 41-42.

<sup>114</sup> Ibid., 2.

<sup>115</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 27.

air interdiction in the peace enforcement environment. The Battlefield Coordination Detachment facilitated horizontal integration, and promoted effective coordination and liaison between the air and ground commanders. Using the relationship between Generals Patton and Weyland as example, the monograph highlighted the importance of informal relationships to build trust and teamwork. Together, formal structure and informal relationships ensure that the actions of air and land forces contribute towards a common goal, and makes possible the other criteria for effective air interdiction in peace enforcement: responsiveness.

U.S. Air Force doctrine acknowledged the important role played by the BCD in developing suitable targets for air interdiction, although it does not specifically address peace enforcement.<sup>117</sup> Using the relationship between Generals Patton and Weyland as example, the monograph highlighted the importance of informal relationships to build trust and teamwork. Current doctrine supports the formal structure and informal relationships needed to ensure that the actions of air and land forces contribute towards a common goal. Unity of effort makes possible the final criteria for effective air interdiction in peace enforcement: responsiveness.

Responsiveness requires air interdiction to deliver the desired effects, on the correct target, within the time constraints established by the ground commander. This requires a clear understanding and acceptance of command relationships, and the capability to provide the desired support. U.S. Air Force doctrine for military operations other than war recognizes the supporting role close air support and air interdiction plays in these operations.<sup>118</sup> In order to provide supporting air interdiction to the division conducting peace enforcement, the JFACC relies on the Joint Aerospace Operations Center and the ATO process. The JFACC may tailor the JAOC to support the unique requirements of the peace enforcement mission. Rapid and responsive targeting is possible using procedures developed during the recent operations in Bosnia and

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<sup>116</sup> Department of the Army, *Field Manual 100-13 Battlefield Coordination Detachment* (Washington, D.C.: GPO, 1996), 5-1.

<sup>117</sup> Department of the Air Force, *AFDD 2-1.3 Counterland* (Washington, D.C.: GPO, 1999), 55.

Kosovo.<sup>119</sup> Although U.S. Air Force doctrine writers have not fully developed the flexible targeting concept, its success suggests that the Air Force will soon adopt it formally.

The Deep Operation Coordination Cell's ability to rapidly nominate and verify targets for the BCD is the most important process to enable responsive air interdiction in support of the division conducting peace enforcement. Although the BCD is an ad hoc organization at the division level, excellent techniques are emerging from Task Force Hawk's experience in the Balkans.<sup>120</sup> U.S. Air Force and Army officers at the JAOC immediately recognized the improvement in targeting made possible by the Task Force Hawk's target acquisition systems and intelligence expertise.<sup>121</sup> Service leaders must capture these important lessons in U.S. Army and Air Force doctrine. While service doctrine has not yet formalized the processes required for responsive air interdiction to support the division conducting peace enforcement, participants in recent operations have documented lessons learned.

## CONCLUSION

Peace enforce operations are vastly different than the mainstream combat roles assigned to air forces. While several prominent researchers have suggested that the U.S. Air Force needs to modify its doctrine to support these non-traditional missions, the monograph concluded that current doctrine is adequate. The U.S. Air Force counterland doctrine, published in 1999, provides the foundation for effective air interdiction in peace enforcement operations. By describing command relationships and flexible air interdiction, the doctrine sets the stage for unity of effort and responsiveness. The author considered each criteria in terms of a division-

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<sup>118</sup> Department of the Air Force, *AFDD 2-3 Military Operations Other Than War* (Washington, D.C.: GPO, 2000), 11.

<sup>119</sup> Robert Bridgeford and Luke Grossman, "BCD Targeting for Operation Allied Force," *The Field Artillery Journal* (January-February 2000): 14-19.

<sup>120</sup> Mark Segovis and Robert Salvatore, "Deep Operations Coordination Cell (DOCC)," *Center for Army Lessons Learned Newsletter* 00-8.

<sup>121</sup> Robert Bridgeford, Neil Hersey and James Varner, "Lessons Learned from Operation Allied Force in Kosovo," *The Field Artillery Journal* (January-February 2000): 10.



sized force because it represented the most challenging case due to the unique command and control relationships, near-term planning focus, and potential for such a force to conduct a peace enforcement mission as the land component of a Joint Task Force. Current doctrine allows for the tailored capabilities needed by the division and promotes effective air interdiction that is flexible, responsive and applied with unity of effort.

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